DUKE POWER COMPANY
POWER BUILDING
422 SOUTH CHURCH STREET, CHARLOTTE, N. C. 28242

WILLIAM O. PARKER, JR.
VICE PRESIDENT
STEAM PRODUCTION

TELEPHONE: AREA 704
373-4083

December 16, 1981

Mr. J. P. O'Reilly, Director
U. S. Nuclear Regulatory Commission
Region II
101 Marietta Street, Suite 3100
Atlants, Georgia 30303

Re: McGuire Nuclear Station Unit 1
Docket No. 50-369

Dear Mr. 'Reilly:

Please find attached Reportable Occurrence Report RO-369/81-182. This report concerns T.S.3.3.1, "As a minimum, the reactor trip system instrumentation channels and interlocks of Table 3.3-1 shall be operable...". This incident was considered to be of no significance with respect to the health and safety of the public.

Very truly yours,

William O. Parker, Jr.

PBN/jfw
Attachment

cc: Director
Office of Management and Program Analysis
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Records Center
Institute of Nuclear Power Operations
1820 Water Place
Atlanta, Georgia 30339

Mr. P. R. Bemis
Senior Resident Inspector-NRC
McGuire Nuclear Station

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DUKE POWER COMPANY
McGUIRE NUCLEAR STATION
REPORTABLE OCCURRENCE REPORT NO. 81-18

REPORT DATE: December 16, 1981

FACILITY: McGuire Unit 1, Cornelius, NC

IDENTIFICATION: Loss of One Channel of Source Range Nuclear Instrumentation Due to Failure of the High Voltage Power Supply

INTRODUCTION: On November 16, while Unit 1 was in mode 4, hot shutdown, enroute to cold shutdown for maintenance, technicians were conducting Source Range Nuclear Instrumentation Functional tests. In the process of testing source range channel N-31, its high voltage power supply failed. The failure of the source range channel in this instance was a degradation of plant status and reportable in accordance with Technical Specification 3.3.1.

The high voltage power supply was replaced and aligned in accordance with the procedure, "Source Range High Voltage Power Supply NQ101 Alignment". The source range channel was then functionally verified through performance of the "Nuclear Instrumentation System Source Range Functional Test", and declared operable on November 17.

Inspection of the faulty power supply determined that a component transformer had overheated.

EVALUATION: The failure of the channel during functional verification was indicative of a possible personnel error in the conduct of the test. Therefore, a "walk thru" of the procedure was conducted with the technicians who had performed the test. Their methods were found not to be suspect and were in conformance with procedural requirements. As a result of this check, the timing of this failure is determined to be coincidental.

It was noted that the transformer in the replacement power supply was ventilated, i.e., had a ventilated top cover plate. The failed transformer had a closed top with heat sinks to remove heat from the transformer internals. The model numbers of the associated power supplies are the same. The units are 300/2500 VDC, 0-10ma adjustable power supplies; Model No. UPMD-X54/W/M1, manufactured by Power Designs, Incorporated.

CORRECTIVE ACTION: Replacement of the faulty power supply, and alignment of the source range channel were the only measures necessary to correct the condition.

VERIFICATION: The channel has functioned correctly since the repair.

SAFETY ANALYSIS: During this incident the redundant source range nuclear instrumentation channel was functional. The health and safety of the public were unaffected by this event.